

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 February 2005 (24.02.2005)

PCT

(10) International Publication Number
WO 2005/017078 A1

(51) International Patent Classification⁷: **C10M 173/00**,
173/02, 105/40

(21) International Application Number:
PCT/GB2004/003019

(22) International Filing Date: 12 July 2004 (12.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0318663.2 11 August 2003 (11.08.2003) GB

(71) Applicant (for all designated States except US): **IMPERIAL CHEMICAL INDUSTRIES PLC** [GB/GB]; 20 Manchester Square, London W1U 3AN (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **LEVERSIDGE, Paul**, Lewton [GB/GB]; 27 Hemingford Gardens, Yarm, Stockton-on-Tees TS15 9ST (GB).

(74) Agents: **RALPH, Julie, Diane et al.**; Uniqema Limited, Intellectual Property Department, Wilton Centre, Wilton, Redcar, Cleveland TS10 4RF (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **ROLLING FORMULATION**

(57) Abstract: A water-soluble rolling oil composition comprises 15 to 70 % by weight of a partial polyol ester which has a hydroxyl value of between 20 and 50 mg KOH/g and a level of polyunsaturation of between 0.01 to 8 % by weight. The water-soluble rolling oil composition has been specifically designed for use in cold steel rolling applications. The use of the specific partial polyol ester in the rolling oil formulation meets the "plate-out" requirements of the mill owners and the requirements for steel sheet surface quality without any corresponding detriment to any of the other water-soluble rolling oil composition requirements, in particular lubricity.



WO 2005/017078 A1